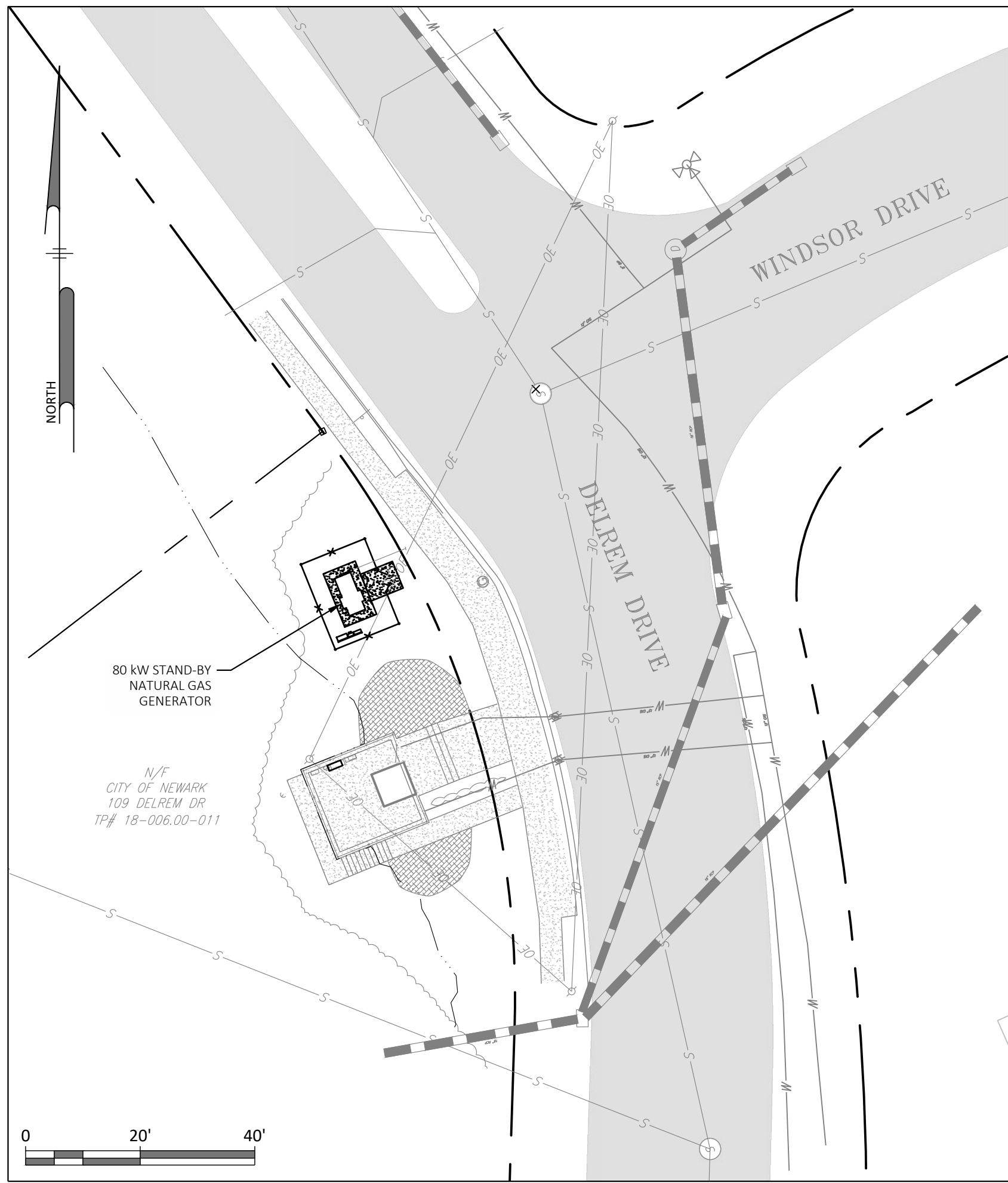
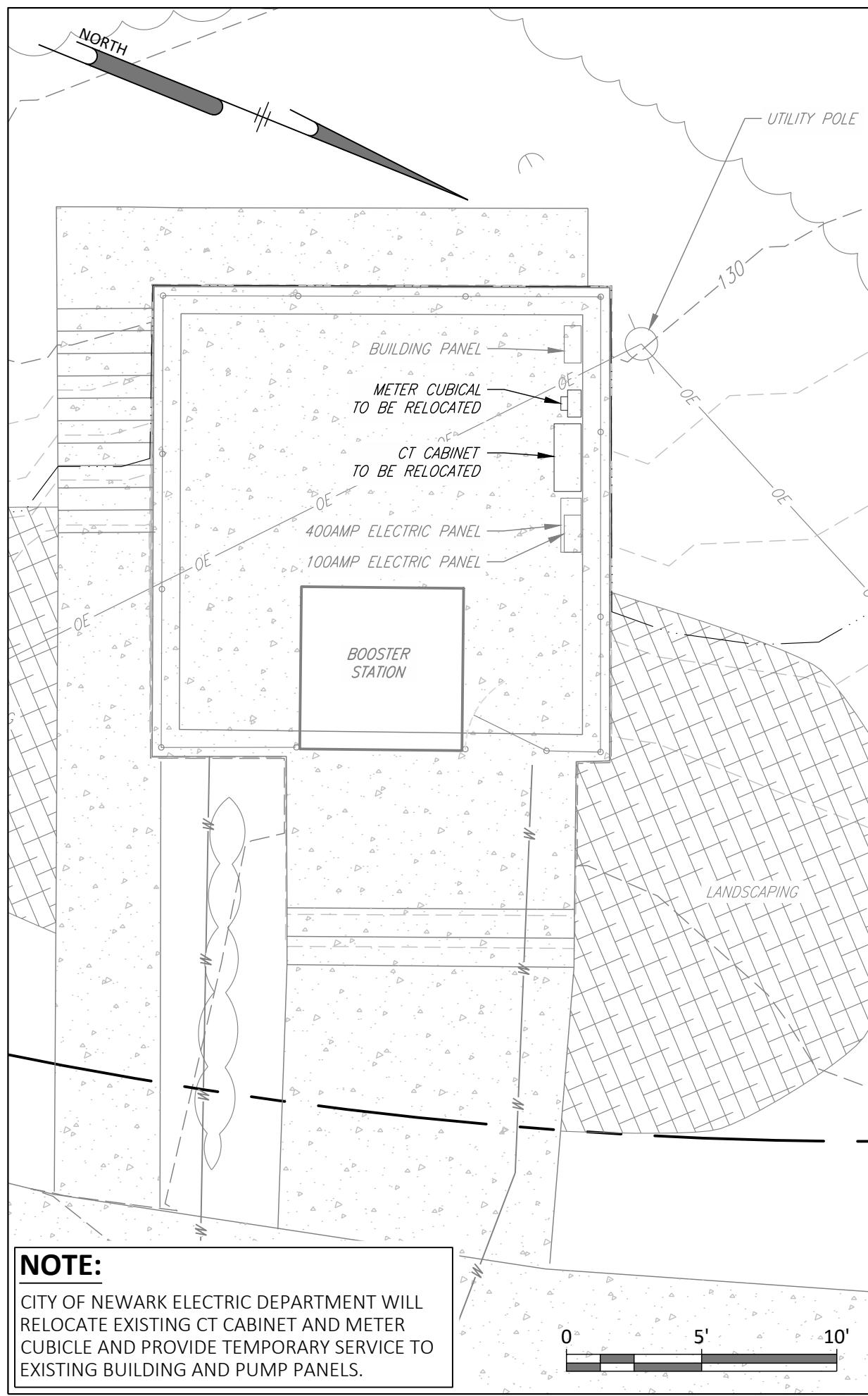


PLOTTED: January 4, 2021

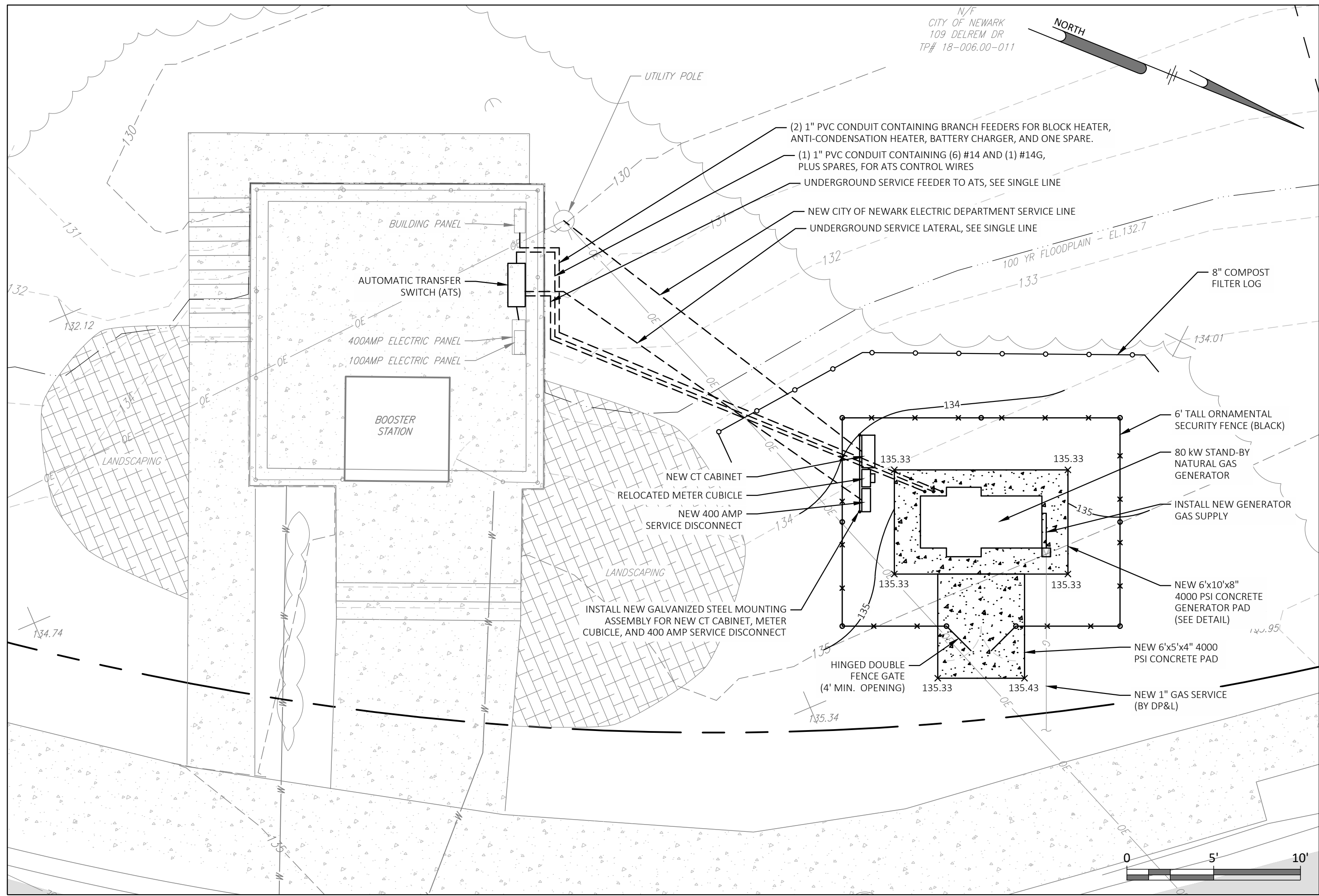
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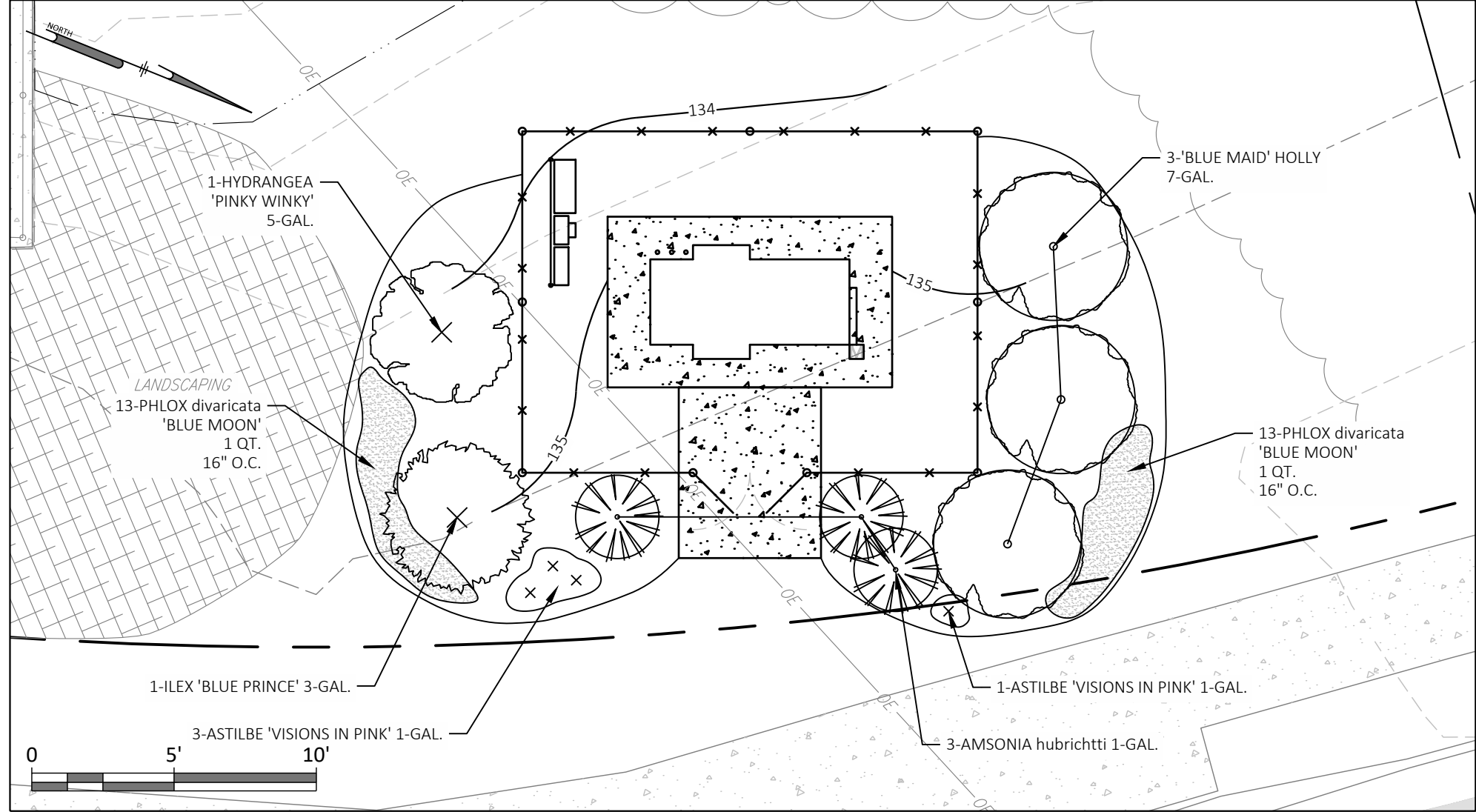
LOCATION PLAN
1" = 20'



BOOSTER STATION: EXISTING CONDITIONS PLAN
1" = 5'



PROPOSED CONDITIONS SITE PLAN
1" = 5'



LANDSCAPE PLAN
1" = 5'

EROSION & SEDIMENT CONTROL NOTES

- LEGAL AUTHORITY: THE CITY OF NEWARK (CITY) IS A DELEGATED AGENCY OF THE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL (DNREC) AS DEFINED IN CHAPTER 40, TITLE 7, OF THE DELAWARE CODE. THE DEPARTMENT MAY ENFORCE COMPLIANCE WITH THE AFOREMENTIONED LAW AND THE DELAWARE EROSION AND SEDIMENT CONTROL THROUGH THE CONTRACT DOCUMENTS OR MAY REFER THE PROJECT TO THE DNREC FOR ENFORCEMENT ACTION. THE CONTRACTOR SHALL CONFORM TO THE EROSION CONTROL AND WATER POLLUTION PRACTICES OUTLINED IN SECTION 457 OF THE CITY OF NEWARK STANDARD SPECIFICATIONS FOR ROADS AND UTILITY CONSTRUCTION- JANUARY 2001 AND THE DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK - APRIL 2016 OR LATEST EDITION. IF THE CONTRACT DOCUMENTS SHOULD BE FOUND TO CONFLICT WITH ANY APPLICABLE FEDERAL, STATE, OR MUNICIPAL WATER POLLUTION CONTROL LAW, RULE, OR REGULATION, THE MORE STRINGENT WATER POLLUTION CONTROL REQUIREMENTS SHALL APPLY.
- DESCRIPTION OF WORK: EROSION AND SEDIMENT CONTROL MEASURES SHALL BE APPLIED TO ERODIBLE EARTH MATERIAL EXPOSED BY ANY OF THE CONTRACTOR'S LAND DISTURBING ACTIVITIES ON THE PROJECT. THE WORK SHALL CONSIST OF THE APPLICATION OF TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL ITEMS AS PROVIDED IN THE CONTRACT OR ORDERED BY THE ENGINEER. THE TEMPORARY EROSION CONTROL ITEMS SHALL BE COORDINATED WITH THE PERMANENT EROSION CONTROL ITEMS SPECIFIED. THE ITEMS SHALL INCLUDE, BUT NOT LIMITED TO, THE USE OF BERMS, DIKES, DAMS, SEDIMENT BASINS, TRAPS, GEOTEXTILES, STONE CHECK DAMS, SILT FENCES, PHASED CONSTRUCTION, SPECIAL LAND GRADING METHODS, MATS AND NETS, AGGREGATES, MULCHES, GRASSES, SLOPE DRAINS, CHEMICAL BINDERS, JACKIFIERS, AND OTHER EROSION AND SEDIMENT CONTROL ITEMS OR APPROVED METHODS AS DESIGNATED ON THE CONTRACT DOCUMENTS OR AS DIRECTED BY THE ENGINEER.
- ALL STORM DRAIN INLETS AND CATCH BASINS, WITHIN AND DOWNSTREAM OF THE WORK AREA, SHALL BE PROVIDED WITH APPROPRIATE INLET PROTECTION PRIOR TO COMMENCEMENT OF ANY EXCAVATION OR SITE DISTURBANCE. THE INLET PROTECTION TYPE AND INSTALLATION SHOULD BE IN ACCORDANCE WITH DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK, OR AS APPROVED BY THE CITY.
- THE CONTRACTOR SHALL INSPECT THE INTEGRITY OF THE PERIMETER CONTROLS PERIODICALLY DURING CONSTRUCTION.
- THE PERIMETER EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED AFTER THE DISTURBED AREA HAS BEEN APPROPRIATELY STABILIZED AND AUTHORIZED BY THE CITY.
- EXISTING TREES, BUSHES, AND SHRUBS SHALL BE PROTECTED BY CONTRACTOR FROM ALL DAMAGE UNLESS IN DIRECT CONFLICT WITH THE WORK.

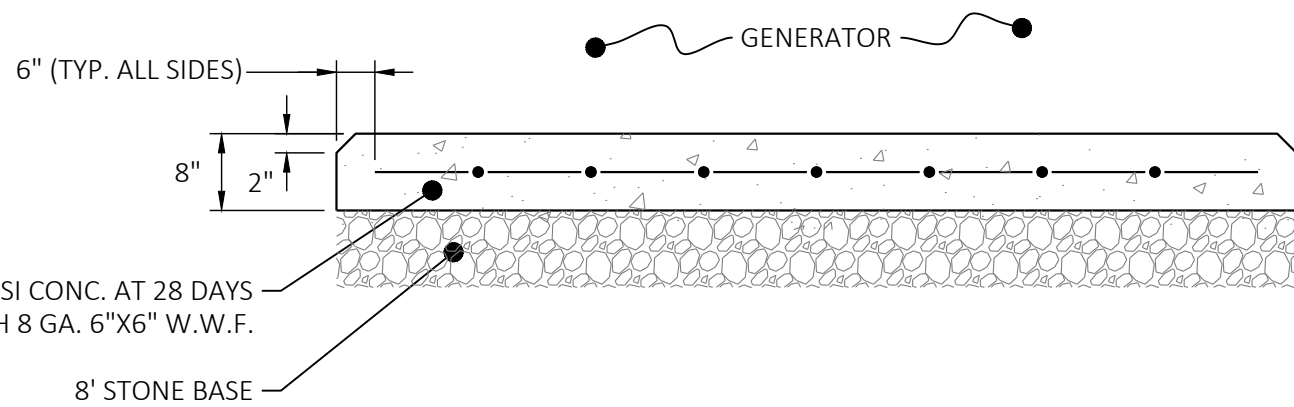
GENERAL NOTES

- ALL CONSTRUCTION, UNLESS OTHERWISE NOTED, SHALL BE IN ACCORDANCE WITH THE CITY OF NEWARK DEPARTMENT OF PUBLIC WORKS AND WATER RESOURCES DETAIL STANDARDS FOR ROAD AND UTILITY CONSTRUCTION, DETAILS AND SUPPLEMENTS.
- NO EXCAVATIONS WERE CONDUCTED DURING THE PREPARATION OF THESE PLANS. THE CONTRACTOR SHALL VERIFY ALL INFORMATION TO HIS/HER OWN SATISFACTION. EXACT LOCATION AND COMPLETENESS IS NOT GUARANTEED. CONTRACTOR SHALL BE MADE AWARE THAT VERIZON AND COMCAST COMMUNICATION UTILITIES ARE NOT SHOWN ON THE DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL INFORMATION THAT MAY AFFECT WORK.
- THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH HAVE OCCURRED BY HIS/HER FAILURE NOT TO EXACTLY LOCATE AND PRESERVE ANY AND ALL EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES AFFECTING HIS/HER WORK. ITEMS SHALL BE REPLACED WITH THE SAME TYPE OF MATERIAL THAT WAS REMOVED OR DAMAGED DURING CONSTRUCTION OR AS DIRECTED BY THE ENGINEER.
- CONTRACTOR IS RESPONSIBLE FOR CONTACTING "MISS UTILITY" AT 1-800-282-8555, 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE LOCATION AND ACTIVITIES OF HIS FORCES WITH THE OWNER, AND ABUTTING PROPERTY OWNERS TO MINIMIZE INTERFERENCE WITH EXISTING UTILITIES, PEDESTRIAN TRAFFIC, AND PROPERTY ACCESS. PEDESTRIAN AND VEHICLE ACCESS SHALL BE MAINTAINED AT ALL TIMES. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE CITY OF NEWARK DEPARTMENT OF PUBLIC WORKS AND WATER RESOURCES PROJECT MANAGER AT 302-366-7000, 48 HOURS PRIOR TO THE START OF CONSTRUCTION.
- THE PLANS AND SPECIFICATIONS DO NOT INCLUDE PROVISIONS FOR CONSTRUCTION SAFETY. A HEALTH AND SAFETY PLAN MUST BE SUBMITTED BY CONTRACTOR PRIOR TO STARTING WORK.
- CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT ALL EXISTING UTILITIES, CURBS, SIDEWALK, PAVING, SHRUBS, FENCING, ETC. ANY AND ALL DAMAGE DONE TO SAME SHALL BE IMMEDIATELY AND COMPLETELY REPAIRED AT CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL SEDIMENT AND EROSION CONTROL MEASURES NECESSARY TO CONSTRUCT THE WORK OUTLINED IN THE PLANS AND SPECIFICATIONS IN ACCORDANCE WITH THE (DNREC) DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK, REV. APRIL 2016, INCLUDING ALL REVISIONS FOLLOWING THIS DATE. PAYMENT TO FURNISH, INSTALL, MAINTAIN AND REMOVE ALL NECESSARY EROSION AND SEDIMENT CONTROL DEVICES/MEASURES SHALL BE INCIDENTAL TO THE WORK BEING PERFORMED PER PLANS.
- METHODS, PROCEDURES AND THE SEQUENCES OF CONSTRUCTION (OTHER THAN THAT NOTED ON THE DRAWINGS) ARE THE RESPONSIBILITY OF THE CONTRACTOR(S).
- ROADWAYS SHALL BE KEPT CLEAN AT ALL TIMES. ALL SOIL SPILLED, DROPPED, WASHED OR TRACKED ONTO ROADWAYS OR OTHER IMPERVIOUS SURFACES MUST BE REMOVED IMMEDIATELY.
- ALL DEBRIS SHALL BE REMOVED ON A DAILY BASIS TO MINIMIZE TRAFFIC INTERRUPTIONS. CONTRACTOR IS RESPONSIBLE FOR SECURING STORAGE AND STAGING AREAS AT HIS OWN EXPENSE.
- CONTRACTOR SHALL PROTECT AND MAINTAIN EXISTING STREET LIGHTING AND TRAFFIC SIGNAL FACILITIES. ANY STREET LIGHTING AND TRAFFIC SIGNAL EQUIPMENT, CABLE, AND CONDUIT FACILITIES AFFECTED BY THE WORK SHALL BE REPLACED IN KIND AT THE SOLE EXPENSE OF THE CONTRACTOR.
- THE CONTRACTOR SHALL AT ALL TIMES MAINTAIN A JOBSITE FREE OF LITTER AND TRASH. THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING THE SITE AT THE END OF THE DAY TO CLEAN UP ANY TRASH OR LITTER GENERATED BY THE PERSONNEL AND SUBCONTRACTORS WORKING FOR THE CONTRACTOR.
- THE ENDS OF ALL CURBS ON NORTH COLLEGE AVENUE SHALL BE DEPRESSED FLUSH WITH THE PAVEMENT.
- STAGING AREAS - PROPER EROSION AND SEDIMENT CONTROL MEASURES AS DETERMINED BY THE ENGINEER SHALL BE INSTALLED IN ALL STAGING AREAS. ALL AREAS USED BY THE CONTRACTOR FOR STAGING OPERATIONS SHALL BE FULLY RESTORED BY THE CONTRACTOR UPON COMPLETION OF THE CONTRACT. IF THE STAGING AREA IS PAVED, IT SHALL BE RESTORED TO ITS ORIGINAL CONDITION. IF THE AREA IS UNPAVED, IT SHALL BE RE-GRADED, TOPSOILED, SEEDED AND MULCHED TO THE SATISFACTION OF THE ENGINEER. ALL COSTS ASSOCIATED WITH RESTORATION OF THE STAGING AREA SHALL BE AT THE CONTRACTOR'S EXPENSE. IF THE ENGINEER DETERMINES THAT A SATISFACTORY STAND OF GRASS DOES NOT EXIST AT THE TIME OF FINAL INSPECTION, ALL COSTS ASSOCIATED WITH A REESTABLISHING A SATISFACTORY STAND OF GRASS SHALL BE AT THE CONTRACTOR'S EXPENSE.
- IN AREAS WHERE PROPOSED CURB MEETS EXISTING CURB AND TWO CURB TYPES ARE NOT SIMILAR, THE PROPOSED CURB SHALL BE TRANSITIONED IN 10 LINEAR FEET, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. PAYMENT FOR THIS WORK, INCLUDING SAW CUTTING EXISTING CURB SHALL BE INCIDENTAL TO THE PROPOSED CURB ITEM.
- ALL HOT-MIX AND CONCRETE SAW CUTTING SHALL BE FULL DEPTH, UNLESS OTHERWISE NOTED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.

MISS UTILITY
OF
DELMARVA



BEFORE YOU DIG CALL
1-800-282-8555
PROTECT YOURSELF, GIVE TWO
WORKING DAYS NOTICE



GENERATOR PAD DETAIL
NOT TO SCALE



CITY OF NEWARK
PUBLIC WORKS AND WATER
RESOURCES DEPARTMENT

220 SOUTH MAIN STREET
NEWARK, DELAWARE 19711
(302) 366-7000
www.newarkde.gov
@cityofnewarkde



NO.	DATE	BY	REVISIONS
1	1/4/2021	MWF	FINAL BID SET

NW BOOSTER STATION GENERATOR
CONTRACT NO. 21-01

SITE PLAN

109 DELREM DR
NEWARK, DELAWARE 19711

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DATE:	2019-07-23
SCALE:	1" = 5'
DRAWN BY:	MWF
APPROVED BY:	EJR
DRAWING:	C101
SHEET	2 OF 5

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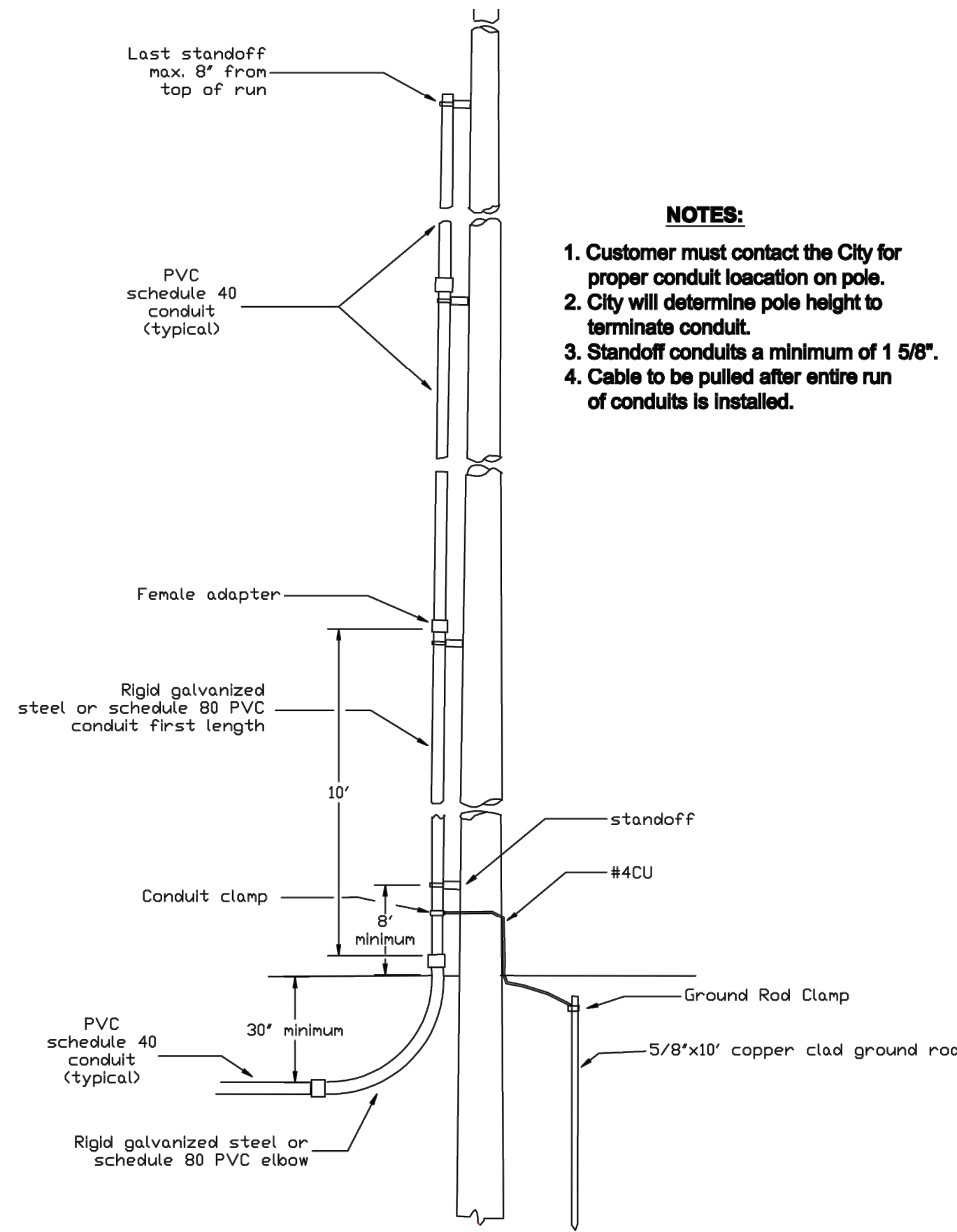
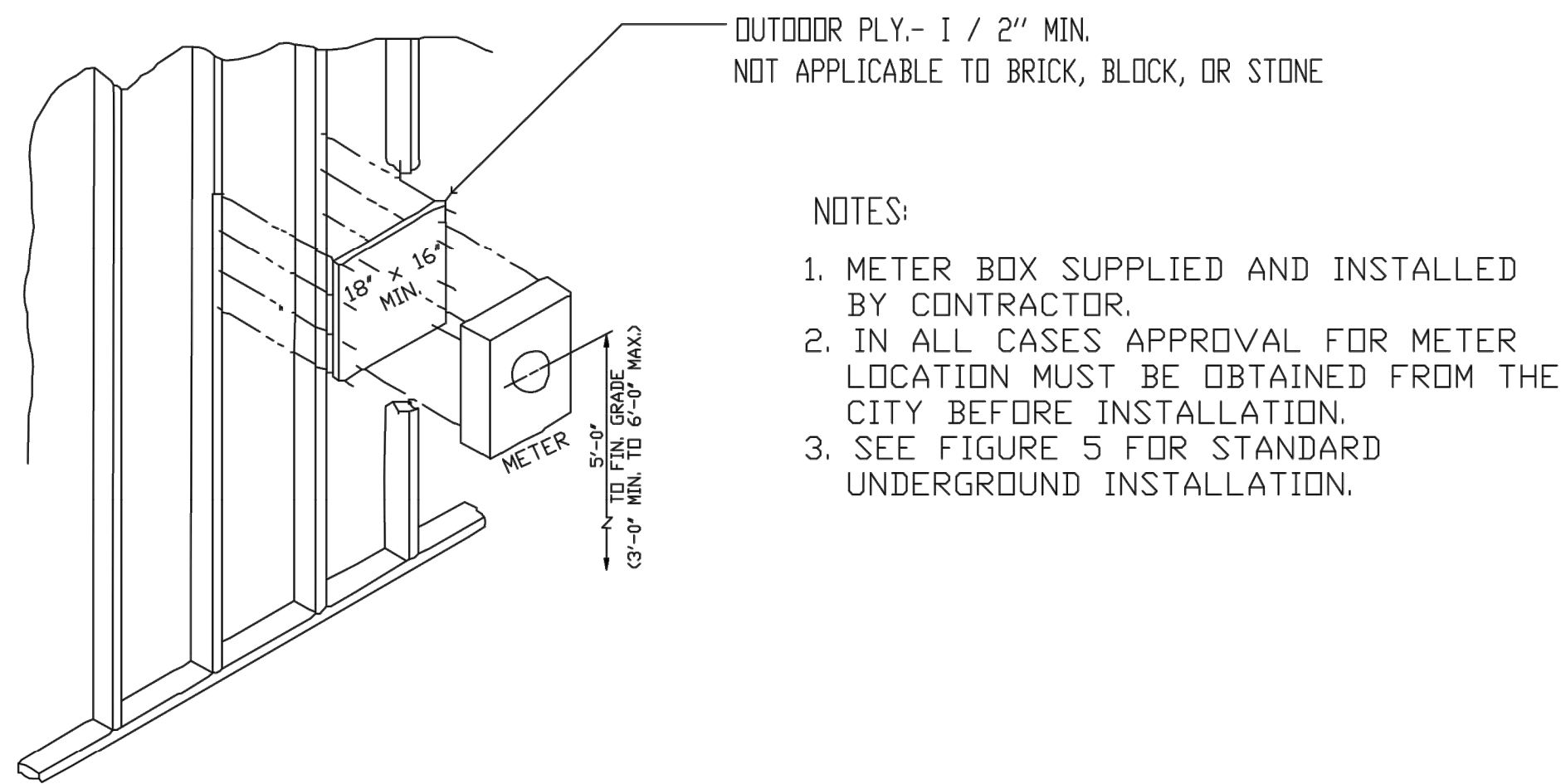


Fig. 8

Fig. 14



- NOTES:
1. METER BOX SUPPLIED AND INSTALLED BY CONTRACTOR.
 2. IN ALL CASES APPROVAL FOR METER LOCATION MUST BE OBTAINED FROM THE CITY BEFORE INSTALLATION.
 3. SEE FIGURE 5 FOR STANDARD UNDERGROUND INSTALLATION.

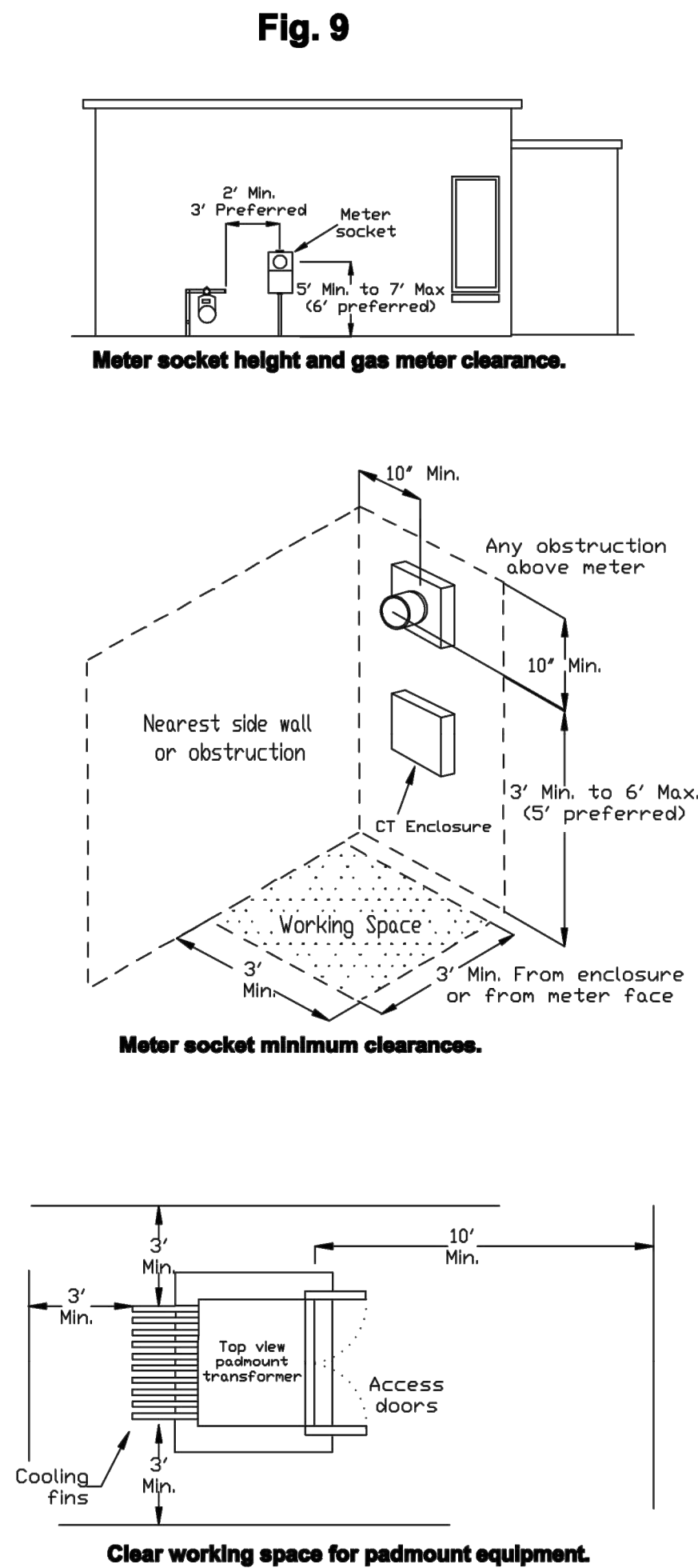


Fig. 16

TYPICAL C.T. CABINET INSTALLATION

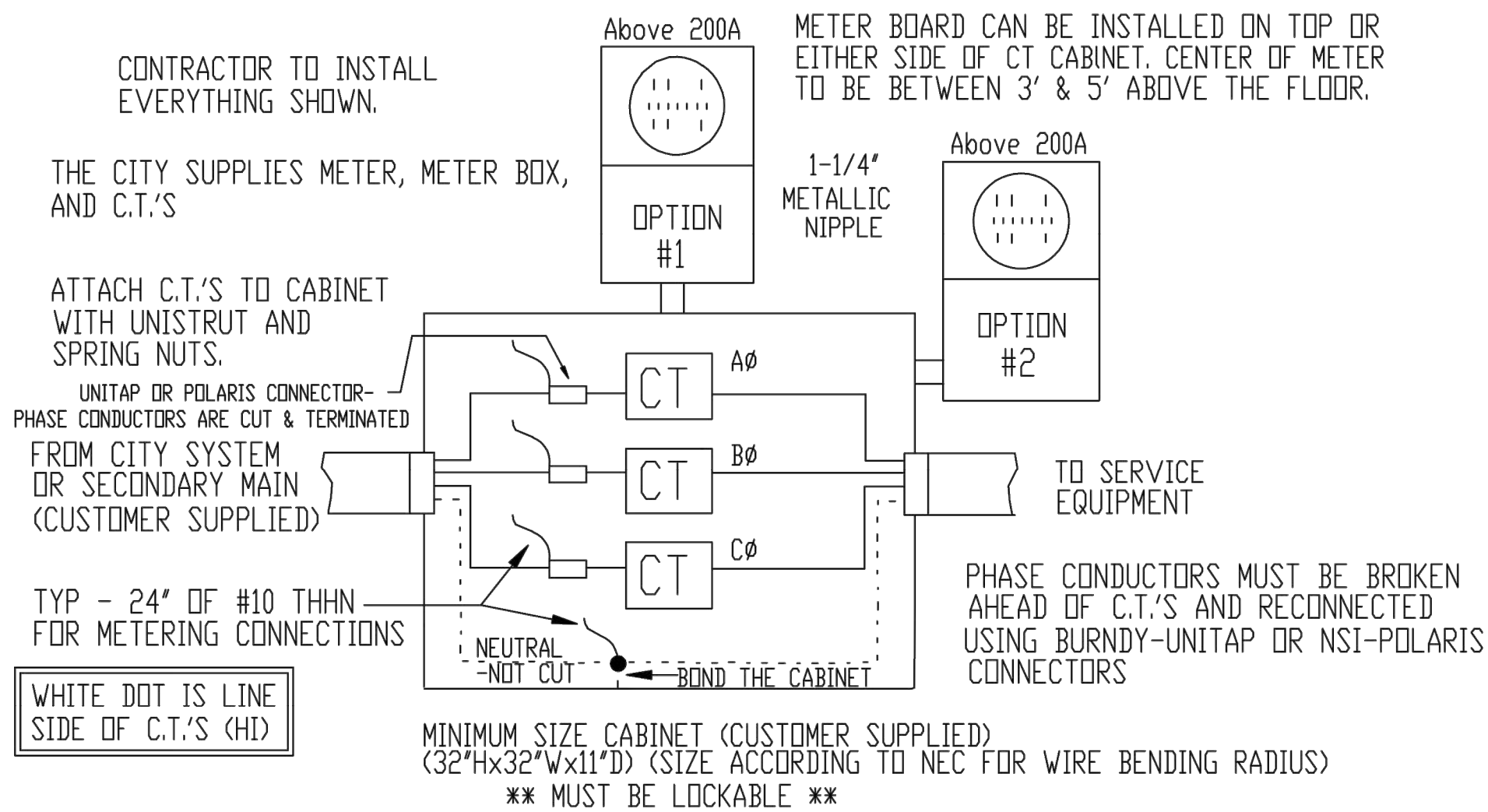


Fig. 13

Approved Padmount Transformer Secondary Lugs for 3 phase transformers
NO EXCEPTIONS
Six conductors per phase maximum

Conductor AL/CU	Burndy Part #
1/0 Stranded	YA25A7
2/0 Stranded	YA26A3
4/0 Stranded	YA28A5
250 kcmil	YA29A3
350 kcmil	YA31A3
500 kcmil	YA34A3
600 kcmil	YA36A3
750 kcmil	YA39A5
1000 kcmil	YA44A3

Single Phase Padmounts up to 75kVA – six 350 kcmil conductors maximum per spade
100kVA – six 500 kcmil conductors max, contingent on space for conduits – contact Electric Department for prior approval – connectors supplied by the City of Newark

Standard Primary Pull Box
36"X48"X36" Deep High Density Polyethylene
Pencell PEM3648X with 2 PEM3648-6 Spacers
Identification- ELECTRIC
Note: Contact City of Newark Electric Department if pullbox will be subject to vehicular traffic

Approved Aerial Commercial Service Entrance Connector
(For use on customer owned service conductors connected to aerial City owned conductors – usually triplex or quadriplex)

Burndy (FCI) - Unitap or NSI Industries – Polaris System

Note: Contact City of Newark Electric Department to review number of conductors City will supply.

Approved Secondary Lugs for conductors directly connected to Aerial Transformer Bushings

Conductor	City supplies 6 position eyebolt connectors
Up to 500 kcmils	YA36A3
600 kcmil	YA39A5
750 kcmil	YA44A3
1000 kcmil	

CITY OF NEWARK
JOINT TRENCHING WITH COMCAST
CABLE & VERIZON TELEPHONE

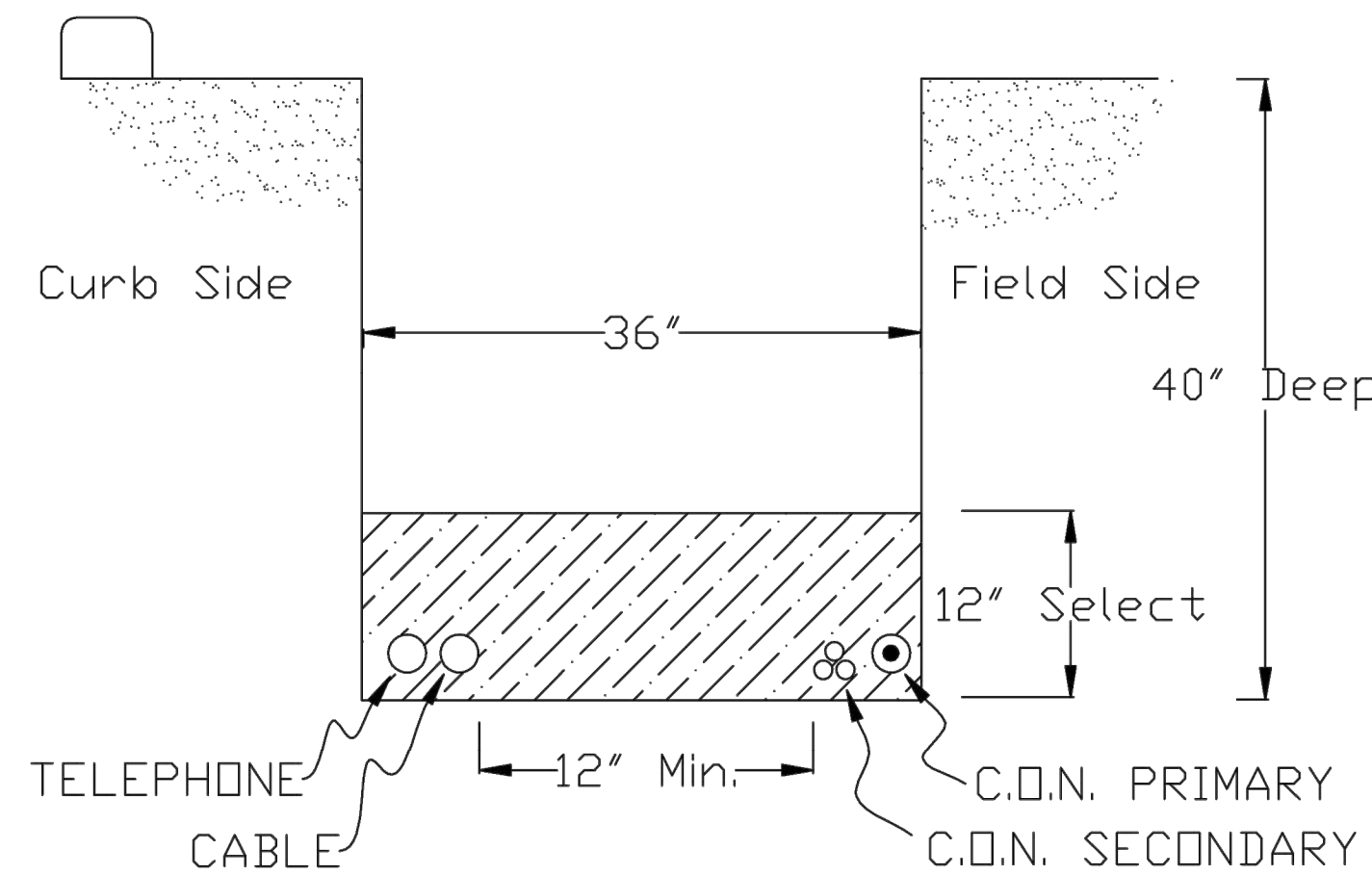




Fig. 17



CITY OF NEWARK
PUBLIC WORKS AND WATER
RESOURCES DEPARTMENT

220 SOUTH MAIN STREET
NEWARK, DELAWARE 19711
www.newarkde.gov
@cityofnewarkde



1
DATE
3/6/2021

NO.
REVISIONS

DATE
3/6/2021

NW BOOSTER STATION GENERATOR
CONTRACT NO. 21-01

ELECTRICAL DETAILS

109 DELREM DR
NEWARK, DELAWARE 19711

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DATE: 2019-07-23

SCALE: 1" = 5'

DRAWN BY: MWF

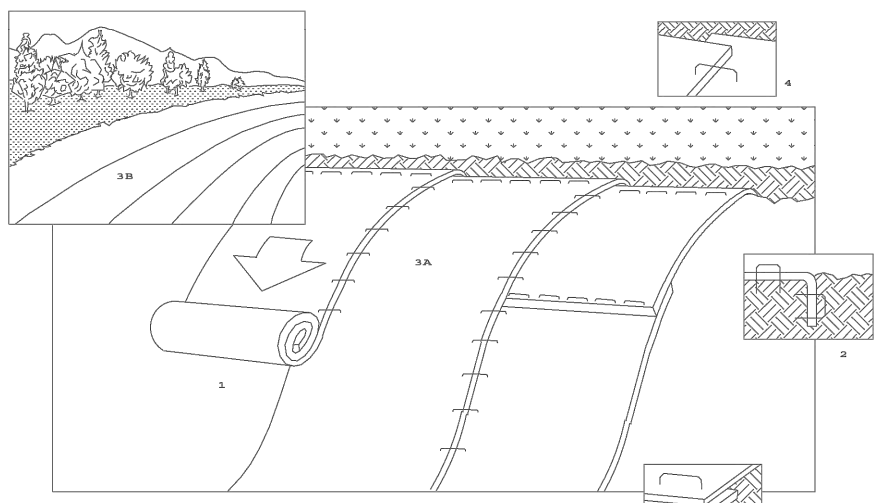
APPROVED BY: EJR

DRAWING:
E201

SHEET 4 OF 5

Standard Detail & Specifications

Stabilization Matting - Slope



Note: Use manufacturer's recommendations for stapling patterns for slope installations.

Perspective

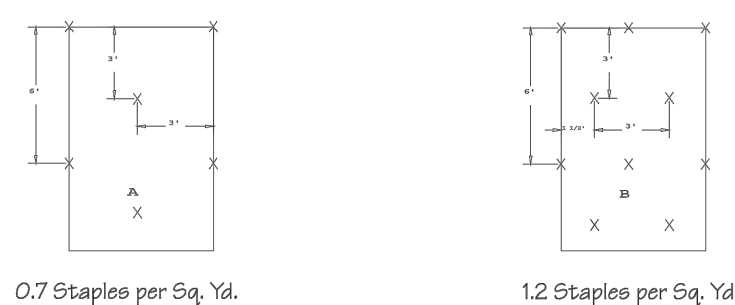
Construction Notes:

1. Prepare soil before installing matting, including application of lime, fertilizer, and seed.
2. Begin at the top of the slope by anchoring the mat in a 6" deep x 6' wide trench. Backfill and compact trench after stapling.
3. Roll the mats (A) down or (B) horizontally across the slope.
4. The edges of parallel mats must be stapled with approx. 2" overlap.
5. When mats must be spliced down the slope, place mats end over end (shingle style) with approx. 4" overlap. Slope through overlapped area, approx. 12" apart.

Source:	Symbol:	Detail No.
Adapted from North American Green, Inc.	SM-S	DE-ESC-3.4.6.1 Sheet 1 of 2 Effective FEB 2019

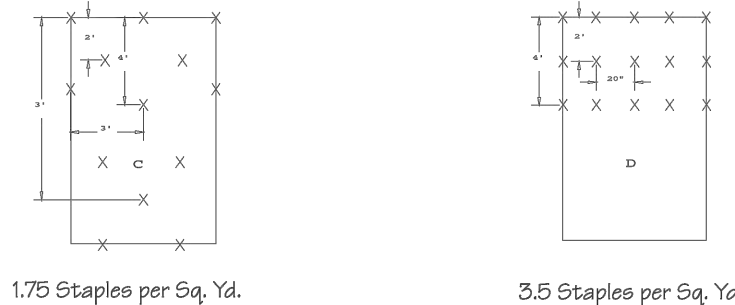
Standard Detail & Specifications

Stabilization Matting - Slope



0.7 Staples per Sq. Yd.

1.2 Staples per Sq. Yd.



1.75 Staples per Sq. Yd.

3.5 Staples per Sq. Yd.

NOTE: These patterns are provided for general guidance only. They shall not be used as a substitute for manufacturer's recommendations.

Stapling Patterns

Source:	Symbol:	Detail No.
Adapted from North American Green, Inc.	SM-S	DE-ESC-3.4.6.1 Sheet 2 of 2 Effective FEB 2019

Standard Detail & Specifications

Vegetative Stabilization

TEMPORARY SEEDING BY RATES, DEPTHS AND DATES											
Mix #	Species ^a	Seeding Rate	Optimum Seeding Dates ¹ O = Optimum Planting Period, A = Acceptable Planting Period								Planting Depth ³
			Coastal Plain				Piedmont				
			lb/Ac ⁴	lb/1000 sq.ft.	9/1	9/15	9/15	9/15	9/15	9/15	
	Certified Seed										
1	Barley	125	4	O	A	O	A	O	A	O	1-2 inches
2	Oats	125	4	O	A	O	A	O	A	A	1-2 inches
3	Rye	125	4	O	A	O	A	O	A	A	1-2 inches
4	Perennial Ryegrass	125	4	O	A	O	A	O	A	O	0.5 inches
5	Annual Ryegrass	125	4	O	A	O	A	O	A	O	0.5 inches
6	Winter Wheat	125	4	O	A	O	A	O	A	O	1-2 inches
7	Postal Millet	30 PLS	0.7	O	A	O	A	O	A	O	0.5 inches
8	Pearl Millet	20 PLS	0.5	O	A	O	A	O	A	O	0.5 inches

1. Winter seeding requires 3 tons per acre of straw mulch for proper stabilization.
2. May be planted throughout summer if soil moisture is adequate or seeded area can be irrigated.
3. Applicable on slopes 3:1 or less.
4. Fifty pounds per acre of Annual Lespedeza may be added to 1/2 the seeding rate of any of the above species.
5. Use varieties currently recommended for Delaware. Contact a County Extension Office for information.
6. Warm season grasses such as Millet or Weeping Lovegrass may be used between 9/1 and 9/15 if desired. Seed at 3-5 lbs. per acre. Good on low fertility and acid areas. Seed after frost through summer at a depth of 0.5".

NOTE: Alternative seed mixes may be used with prior approval from the Department or Delegated Agency.

Source:	Symbol:	Detail No.
Delaware ESC Handbook		DE-ESC-3.4.3 Sheet 1 of 4 Effective FEB 2019

Standard Detail & Specifications

Vegetative Stabilization

PERMANENT SEEDING AND SEEDING DATES											
Mix No.	Certified Seed ¹	Seeding Rate ²	Optimum Seeding Dates ³ O = Optimum Planting Period, A = Acceptable Planting Period								Remarks
			lb/Ac	lb/1000 sq.ft.	9/1	9/15	9/15	9/15	9/15	10/1	
1	Well Drained Soils	125	4	O	A	O	A	O	A	O	
2	Weakly Drained Soils	125	4	O	A	O	A	O	A	O	
3	Strongly Drained Soils	125	4	O	A	O	A	O	A	O	
4	Very Poorly Drained Soils	125	4	O	A	O	A	O	A	O	
5	Very Poorly Drained Soils	125	4	O	A	O	A	O	A	O	
6	Very Poorly Drained Soils	125	4	O	A	O	A	O	A	O	
7	Very Poorly Drained Soils	125	4	O	A	O	A	O	A	O	
8	Very Poorly Drained Soils	125	4	O	A	O	A	O	A	O	
9	Very Poorly Drained Soils	125	4	O	A	O	A	O	A	O	
10	Very Poorly Drained Soils	125	4	O	A	O	A	O	A	O	
11	Very Poorly Drained Soils	125	4	O	A	O	A	O	A	O	
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68	Very Poorly Drained Soils	125	4	O	A	O	A	O	A	O	
69	Very Poorly Drained Soils	125	4	O	A	O	A	O	A	O	
70	Very Poorly Drained Soils	125	4	O	A	O	A	O	A	O	
71	Very Poorly Drained Soils	125	4	O	A	O	A	O	A	O	
72	Very Poorly Drained Soils	125	4	O	A	O	A	O	A	O	
73	Very Poorly Drained Soils	125	4	O	A	O	A	O	A	O	
74	Very Poorly Drained Soils	125	4	O	A	O	A	O	A	O	
75	Very Poorly Drained Soils	125	4	O	A	O	A	O	A	O	
76	Very Poorly Drained Soils	125	4	O	A	O	A	O	A	O	
77	Very Poorly Drained Soils	125	4	O	A	O	A	O	A	O	
78	Very Poorly Drained Soils	125	4	O	A	O	A	O	A	O	
79	Very Poorly Drained Soils	125	4	O	A	O	A	O	A	O	
80	Very Poorly Drained Soils	125	4	O	A	O	A	O	A	O	
81	Very Poorly Drained Soils	125	4	O	A	O	A	O	A	O	
82	Very Poorly Drained Soils	125	4	O	A	O	A	O	A	O	
83	Very Poorly Drained Soils	125	4	O	A	O	A	O	A	O	
84	Very Poorly Drained Soils	125	4	O	A	O	A	O	A	O	
85	Very Poorly Drained Soils	125	4	O	A	O	A	O	A	O	
86	Very Poorly Drained Soils	125	4	O	A	O	A	O	A	O	
87	Very Poorly Drained Soils	125	4	O	A	O	A	O	A	O	
88	Very Poorly Drained Soils	125	4	O	A	O	A	O	A	O	
89	Very Poorly Drained Soils	125	4	O	A	O	A	O	A	O	
90	Very Poorly Drained Soils	125	4	O	A	O	A	O	A	O	
91	Very Poorly Drained Soils	125	4	O	A	O	A	O	A	O	
92	Very Poorly Drained Soils	125	4	O	A	O	A	O	A	O	
93	Very Poorly Drained Soils	125	4	O	A	O	A	O	A	O	
94	Very Poorly Drained Soils	125	4	O	A	O	A	O	A	O	
95	Very Poorly Drained Soils	125	4	O	A	O	A	O	A	O	
96	Very Poorly Drained Soils	125	4	O	A	O	A	O	A	O	
97	Very Poorly Drained Soils	125	4	O	A	O	A	O	A	O	
98	Very Poorly Drained Soils	125	4	O	A	O	A	O	A	O	
99	Very Poorly Drained Soils	125	4	O	A	O	A	O	A	O	
100	Very Poorly Drained Soils	125	4	O	A	O	A	O	A	O	

NOTE: Alternative seed mixes may be used with prior approval from the Department or Delegated Agency.

Source:	Symbol:	Detail No.
Delaware ESC Handbook		DE-ESC-3.4.3 Sheet 2 of 4 Effective FEB 2019

Standard Detail & Specifications

Vegetative Stabilization

PERMANENT SEEDING AND SEEDING DATES (cont.)											
Mix No.	Certified Seed ¹	Seeding Rate ²	Optimum Seeding Dates ³ O = Optimum Planting Period, A = Acceptable Planting Period								Remarks
			lb/Ac	lb/1000 sq.ft.	9/1	9/15	9/15	9/15	9/15	10/1	
1	Well Drained Soils	125	4	O	A	O	A	O	A	O	
2	Weakly Drained Soils	125	4	O	A	O	A	O	A	O	
3	Strongly Drained Soils	125	4	O	A	O	A	O	A	O	
4	Very Poorly Drained Soils	125	4	O	A	O	A	O	A	O	
5	Very Poorly Drained Soils	125	4	O	A	O	A	O	A	O	